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retainers with self-locking cotter	429* 416 257\$ 352* 419* 229† 39* 371* 19\$ 329\$ 234 26 27 63 64	Barthelemy, P. P. Car design, Freight, Tendencies in Hot boxes, Common conditions causing .25, Safety appliances Bearings, Babbitted, Reconditioning, on the shaper Bearings, Journal Car, Preparation of, Ry. Service & Supply Corp. Performance of, improved by research, Railway Service & Supply Co Bearings, Roller Applied to trailer trucks Self-alining, Shafer Bearing Corp. Beautifying shop grounds. Belts, Leather, Inspecting and reconditioning, by J. N. Smith. Belts, V-, for Multi-V-Drives, Worthington Pump & Machy. Corp. Benches, Repair (see Shop Kinks) Berry, Dr. C. F., Brake burns Beveling lining boards. Boilers, Locomotive Explosions still a menace. Torrey's patent safety apparatus. Tubes, Electric resistance weld, Steel and Tubes, Inc Bolts, Saddle, Removing (Air Reduction Sales Co.)	255 100 402 296* 323* 122* 224* 85* 95\$ 105 375 21\$ 174* 91\$ 127* 144* 268	Piston-valve, Device for applying Valve-chamber and cylinder, Device for pressing in Business outlook C Cab lettering, Protecting Cabinet, Drill, for machine shop Canadian Pacific, Multi-pressure locomotive, by H. Holcroft. Car Bad order: Breakers ahead! Bearings, Journal (see Bearings, Journal) Construction (Mech. Div.). Doors (see Doors) Failures, Reduced Frames (see Frames) Freight Design Effect of, on wheel service Freight, Rehabilitation of Heating (see Heating) Orders: Prospects for new equipment Replacements: New life at the top Roofs (see Roofs) Tendencies in, by P. P. Barthelemy Traffic Officer's suggestions 159, 202, 2128, 255, 287, Wheels (see Wheels) Car Foremen's Assn. of Chicago (see Clubs)	412* 259\$ 269* 450* 169\$ 212\$ 241 18\$ 326\$ 92\$ 398\$
retainers with self-locking cotter	429* 416 257\$ 352* 419* 229† 39* 371* 19\$ 3234 26 27 63	Barthelemy, P. P. Car design, Freight, Tendencies in Hot boxes, Common conditions causing Safety appliances Bearings, Babbitted, Reconditioning, on the shaper Bearings, Journal Car, Preparation of, Ry. Service & Supply Corp. Performance of, improved by research, Railway Service & Supply Co Bearings, Roller Applied to trailer trucks Belts, Leather, Inspecting and reconditioning, by J. N. Smith. Belts, V-, for Multi-V-Drives, Worthington Pump & Machy. Corp. Benches, Repair (see Shop Kinks) Berry, Dr. C. F., Brake burns. Beveling lining boards. Boilers, Locomotive Explosions still a menace. Torrey's patent safety apparatus. Tubes, Electric resistance weld, Steel and Tubes, Inc Bolts, Saddle, Removing (Air Reduction Sales Co.) Books Apprenticeship, by Stewart Scrimshaw	255 100 402 296* 323* 122* 224* 85* 95\$ 105 375 21\$ 174* 918 127* 144* 268	Piston-valve, Device for applying Valve-chamber and cylinder, Device for pressing in Business outlook C Cab lettering, Protecting Cabinet, Drill, for machine shop Canadian Pacific, Multi-pressure locomotive, by H. Holcroft. Car Bad order: Breakers ahead! Bearings, Journal (see Bearings, Journal) Construction (Mech. Div.). Doors (see Doors) Failures, Reduced Frames (see Frames) Freight Design Effect of, on wheel service Freight, Rehabilitation of Heating (see Heating) Orders: Prospects for new equipment Replacements: New life at the top Roofs (see Roofs) Tendencies in, by P. P. Barthelemy Traffic Officer's suggestions 159, 202, 212\$, 255, 287, Wheels (see Wheels) Car Foremen's Assn. of Chicago (see Clubs and Associations) Car pooling, Committee to study	412* 259\$ 269* 450* 169\$ 212\$ 241 18\$ 326\$ 92\$ 398\$
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retainers with self-locking cotter	429* 416 257\$ 352* 419* 229† 39* 371* 19\$ 329\$ 234 26 27 63 64	Barthelemy, P. P. Car design, Freight, Tendencies in Hot boxes, Common conditions causing Safety appliances Bearings, Babbitted, Reconditioning, on the shaper Bearings, Journal Car, Preparation of, Ry. Service & Supply Corp. Performance of, improved by research, Railway Service & Supply Co Bearings, Roller Applied to trailer trucks Belts, Leather, Inspecting and reconditioning, by J. N. Smith. Belts, V-, for Multi-V-Drives, Worthington Pump & Machy. Corp. Benches, Repair (see Shop Kinks) Berry, Dr. C. F., Brake burns. Beveling lining boards. Boilers, Locomotive Explosions still a menace. Torrey's patent safety apparatus. Tubes, Electric resistance weld, Steel and Tubes, Inc Bolts, Saddle, Removing (Air Reduction Sales Co.) Books Apprenticeship, by Stewart Scrimshaw	255 100 402 296* 323* 122* 224* 85* 95\$ 105 375 21\$ 174* 918 127* 144* 268	Piston-valve, Device for applying Valve-chamber and cylinder, Device for pressing in Business outlook C Cab lettering, Protecting Cabinet, Drill, for machine shop Canadian Pacific, Multi-pressure locomotive, by H. Holcroft. Car Bad order: Breakers ahead! Bearings, Journal (see Bearings, Journal) Construction (Mech. Div.) Doors (see Doors) Failures, Reduced Frames (see Frames) Freight Design Effect of, on wheel service Freight, Rehabilitation of Heating (see Heating) Orders: Prospects for new equipment Replacements: New life at the top Roofs (see Roofs) Tendencies in, by P. P. Barthelemy Traffic Officer's suggestions 159, 202, 212\$, 255, 287, Wheels (see Wheels) Car Foremen's Assn. of Chicago (see Clubs and Associations) Car pooling, Committee to study Cars Freight Box, Standard steel-sheathed A. R. A.	412* 259\$ 269* 450* 169\$ 212\$ 241 18\$ 326\$ 92\$ 255 292\$ 452†
retainers with self-locking cotter	429* 416 257\$ 352* 419* 229† 39* 371* 19\$ 329\$ 234 26 27 63 64 63	Barthelemy, P. P. Car design, Freight, Tendencies in Hot boxes, Common conditions causing Safety appliances Bearings, Babbitted, Reconditioning, on the shaper Bearings, Journal Car, Preparation of, Ry. Service & Supply Corp. Performance of, improved by research, Railway Service & Supply Co Bearings, Roller Applied to trailer trucks Belts, Leather, Inspecting and reconditioning, by J. N. Smith. Belts, V-, for Multi-V-Drives, Worthington Pump & Machy. Corp. Benches, Repair (see Shop Kinks) Berry, Dr. C. F., Brake burns. Beveling lining boards. Boilers, Locomotive Explosions still a menace. Torrey's patent safety apparatus. Tubes, Electric resistance weld, Steel and Tubes, Inc Bolts, Saddle, Removing (Air Reduction Sales Co.) Books Apprenticeship, by Stewart Scrimshaw	255 100 402 296* 323* 122* 224* 85* 95\$ 105 375 21\$ 174* 918 127* 144* 268	Piston-valve, Device for applying Valve-chamber and cylinder, Device for pressing in Business outlook C Cab lettering, Protecting Cabinet, Drill, for machine shop Canadian Pacific, Multi-pressure locomotive, by H. Holcroft. Car Bad order: Breakers ahead! Bearings, Journal (see Bearings, Journal) Construction (Mech. Div.) Doors (see Doors) Failures, Reduced Frames (see Frames) Freight Design Effect of, on wheel service Freight, Rehabilitation of Heating (see Heating) Orders: Prospects for new equipment Replacements: New life at the top Roofs (see Roofs) Tendencies in, by P. P. Barthelemy Traffic Officer's suggestions 159, 202, 212\$, 255, 287, Wheels (see Wheels) Car Foremen's Assn. of Chicago (see Clubs and Associations) Car pooling, Committee to study Cars Freight Box, Standard steel-sheathed A. R. A Helium, for U. S. Navy	269° 450° 212\$ 241 18\$ 326\$ 92\$ 255 292\$
retainers with self-locking cotter American Society of Mechanical Engineers Ratios of Modern locomotives 86*, 119*, 166\$, 260\$, 357, 390, Research and the railways 257\$, 400\$, Spring meeting Steel, Welded, Diesel structures, by Everett Chapman Union Pacific light-weight high-speed train, by E. E. Adams American Welding Society honors H. H. Moss Analyses, Graphical, of mechanical operations, by L. Richardson. Angle cocks, Stripping, Pneumatic device for Appeal to the public, An. Apprentices, What about, when business picks up? Arbitration Committee report (Mech. Div.) Arbitration Decisions Case No. 1698—Union Tank Car Co. vs. Wichita Falls & Southern—Rule 12. 1699—Wilson Car Lines vs. Chicago, Burlington & Quincy—Rules 43 and 44. 1700—C. M. St. P. & P. vs. C. G. W. —Rules 31 and 107. 1701—A. C. & Y. vs. N. Y. C. & St. L. —Rule 99 1702—C. R. I. & P. vs. N. Y. N. H. & H.—Rules 12 and 30. 1703—C. R. I. & P. vs. N. Y. Rules 36 and 98 1704—Missouri Pacific vs. Western Pacific—Rules 32 and PC8 1704—C. R. I. & P. vs. M. D. Rules 36 and 98 1704—C. Rules 32 and PC8.	429* 416 257\$ 352* 419* 229† 39* 371* 19\$ 329\$ 234 26 27 63 64 63 101 138	Barthelemy, P. P. Car design, Freight, Tendencies in Hot boxes, Common conditions causing Safety appliances Bearings, Babbitted, Reconditioning, on the shaper Bearings, Journal Car, Preparation of, Ry. Service & Supply Corp. Performance of, improved by research, Railway Service & Supply Co Bearings, Roller Applied to trailer trucks Belts, Leather, Inspecting and reconditioning, by J. N. Smith. Belts, V-, for Multi-V-Drives, Worthington Pump & Machy. Corp. Benches, Repair (see Shop Kinks) Berry, Dr. C. F., Brake burns. Beveling lining boards. Boilers, Locomotive Explosions still a menace. Torrey's patent safety apparatus. Tubes, Electric resistance weld, Steel and Tubes, Inc Bolts, Saddle, Removing (Air Reduction Sales Co.) Books Apprenticeship, by Stewart Scrimshaw	255 100 402 296* 323* 122* 224* 85* 95\$ 105 375 21\$ 174* 918 127* 144* 268	Piston-valve, Device for applying Valve-chamber and cylinder, Device for pressing in Business outlook C Cab lettering, Protecting Cabinet, Drill, for machine shop Canadian Pacific, Multi-pressure locomotive, by H. Holcroft. Car Bad order: Breakers ahead! Bearings, Journal (see Bearings, Journal) Construction (Mech. Div.) Doors (see Doors) Failures, Reduced Frames (see Frames) Freight Design Effect of, on wheel service Freight, Rehabilitation of Heating (see Heating) Orders: Prospects for new equipment Replacements: New life at the top Roofs (see Roofs) Tendencies in, by P. P. Barthelemy Traffic Officer's suggestions 159, 202, 212\$, 255, 287, Wheels (see Wheels) Car Foremen's Assn. of Chicago (see Clubs and Associations) Car pooling, Committee to study Cars Freight Box, Standard steel-sheathed A. R. A Helium, for U. S. Navy	412* 259\$ 269* 450* 169\$ 212\$ 241 18\$ 326\$ 92\$ 452\$ 452\$ 452\$
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retainers with self-locking cotter American Society of Mechanical Engineers Ratios of Modern locomotives 86*, 119*, 166\$, 260\$, 357, 390, Research and the railways 257\$, 400\$, Spring meeting Steel, Welded, Diesel structures, by Everett Chapman Union Pacific light-weight high-speed train, by E. E. Adams American Welding Society honors H. H. Moss Analyses, Graphical, of mechanical operations, by L. Richardson. Angle cocks, Stripping, Pneumatic device for Appeal to the public, An. Apprentices, What about, when business picks up? Arbitration Committee report (Mech. Div.) Arbitration Decisions Case No 1698—Union Tank Car Co. vs. Wichita Falls & Southern—Rule 12 1699—Wilson Car Lines vs. Chicago, Burlington & Quincy—Rules 43 and 44 1700—C. M. St. P. & P. vs. C. G. W. —Rules 31 and 107 1701—A. C. & Y. vs. N. Y. C. & St. L. —Rule 99 1702—C. R. I. & P. and C. B. & Q. vs. North American Car Corp.—Rules 86 and 98 1704—Missouri Pacific vs. Western Pacific—Rules 32 and PC8 1705—C. R. I. & P. vs. Mo. Pac.— Rules 12 and 43 1706—C. & N. W. vs. III. Central—	429* 416 257\$ 352* 419* 229† 39* 371* 19\$ 329\$ 234 26 27 63 64 63 101 138 101	Barthelemy, P. P. Car design, Freight, Tendencies in Hot boxes, Common conditions causing .25, Safety appliances Bearings, Babbitted, Reconditioning, on the shaper Bearings, Journal Car, Preparation of, Ry. Service & Supply Corp. Performance of, improved by research, Railway Service & Supply Co Bearings, Roller Applied to trailer trucks. Self-alining, Shafer Bearing Corp. Beautifying shop grounds. Belts, Leather, Inspecting and reconditioning, by J. N. Smith. Belts, V-, for Multi-V-Drives, Worthington Pump & Machy. Corp. Benches, Repair (see Shop Kinks) Berry, Dr. C. F., Brake burns. Beveling lining boards. Boilers, Locomotive Explosions still a menace. Torrey's patent safety apparatus. Tubes, Electric resistance weld, Steel and Tubes, Inc Bolts, Saddle, Removing (Air Reduction Sales Co.) Books Apprenticeship, by Stewart Scrimshaw Handbook of Butane-Propane Gases. Maintenance Service on the German State Railways, by H. Peter Kuchne Mechanical World Year Book. Oil Engine Traction. Petroleum products and lubricants, A. S. T. M. Proceedings of Fuel Association Proceedings of Fuel Association	255 100 402 296* 323* 122* 224* 85* 95‡ 105 375 21‡ 174* 268 439 294 214 93 93 57 20	Piston-valve, Device for applying. Valve-chamber and cylinder, Device for pressing in Business outlook C Cab lettering, Protecting. Cabinet, Drill, for machine shop. Canadian Pacific, Multi-pressure locomotive, by H. Holcroft. Car Bad order: Breakers ahead! Bearings, Journal (see Bearings, Journal) Construction (Mech. Div.) Doors (see Doors)' Failures, Reduced Frames (see Frames) Freight Design Effect of, on wheel service Freight, Rehabilitation of Heating (see Heating) Orders: Prospects for new equipment Replacements: New life at the top Roofs (see Roofs) Tendencies in, by P. P. Barthelemy. Traffic Officer's suggestions 159, 202, 212\$, 255, 287, Wheels (see Wheels) Car Foremen's Assn. of Chicago (see Clubs and Associations) Car pooling, Committee to study. Cars Freight Box, Standard steel-sheathed A. R. A Helium, for U. S. Navy. Hopper All-welded, with cast-steel under- For cement (D. & H.)	412* 259\$ 269* 450* 169\$ 212\$ 241 18\$ 326\$ 92\$ 452† 388* 58*
retainers with self-locking cotter	429* 416 2578 352* 419* 229† 39* 371* 198 329\$ 234 26 27 63 64 63 101 138 101 175	Barthelemy, P. P. Car design, Freight, Tendencies in Hot boxes, Common conditions causing .25, Safety appliances Bearings, Babbitted, Reconditioning, on the shaper Bearings, Journal Car, Preparation of, Ry. Service & Supply Corp. Performance of, improved by research, Railway Service & Supply Co Bearings, Roller Applied to trailer trucks. Self-alining, Shafer Bearing Corp. Beautifying shop grounds. Belts, Leather, Inspecting and reconditioning, by J. N. Smith. Belts, V-, for Multi-V-Drives, Worthington Pump & Machy. Corp. Benches, Repair (see Shop Kinks) Berry, Dr. C. F., Brake burns. Beveling lining boards. Boilers, Locomotive Explosions still a menace. Torrey's patent safety apparatus. Tubes, Electric resistance weld, Steel and Tubes, Inc Bolts, Saddle, Removing (Air Reduction Sales Co.) Books Apprenticeship, by Stewart Scrimshaw Handbook of Butane-Propane Gases. Maintenance Service on the German State Railways, by H. Peter Kuchne Mechanical World Year Book. Oil Engine Traction. Petroleum products and lubricants, A. S. T. M. Proceedings of Fuel Association Proceedings of Fuel Association	255 100 402 296* 323* 122* 224* 85* 95‡ 105 375 21‡ 174* 268 439 294 214 93 93 57 20	Piston-valve, Device for applying. Valve-chamber and cylinder, Device for pressing in Business outlook C Cab lettering, Protecting. Cabinet, Drill, for machine shop. Canadian Pacific, Multi-pressure locomotive, by H. Holcroft. Car Bad order: Breakers ahead! Bearings, Journal (see Bearings, Journal) Construction (Mech. Div.). Doors (see Doors) Failures, Reduced Frames (see Frames) Freight Design Effect of, on wheel service Freight Design Effect of, on wheel service Freight, Rehabilitation of Heating (see Heating) Orders: Prospects for new equipment Replacements: New life at the top Roofs (see Roofs) Tendencies in, by P. P. Barthelemy. Traffic Officer's suggestions 159, 202, 212\$, 255, 287, Wheels (see Wheels) Car Foremen's Assn. of Chicago (see Clubs and Associations) Car pooling, Committee to study. Cars Freight Box, Standard steel-sheathed A. R. A. Helium, for U. S. Navy. Hopper All-welded, with cast-steel under- frames For cement (D. & H.) Panel side (C. & O.) Self-clearing, for cement (D. I. & W.)	412* 259\$ 269* 450* 169\$ 212\$ 241 18\$ 326\$ 92\$ 452† 388* 58*
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retainers with self-locking cotter	429* 416 2578 352* 419* 229† 39* 371* 19\$ 329\$ 234 26 27 63 64 63 101 138 101 175 138	Barthelemy, P. P. Car design, Freight, Tendencies in Hot boxes, Common conditions causing	255 100 402 296* 323* 122* 224* 85* 95‡ 105 375 21‡ 174* 268 439 294 214 93 93 57 20	Piston-valve, Device for applying. Valve-chamber and cylinder, Device for pressing in Business outlook C Cab lettering, Protecting Cabinet, Drill, for machine shop Canadian Pacific, Multi-pressure locomotive, by H. Holcroft. Car Bad order: Breakers ahead! Bearings, Journal (see Bearings, Journal) Construction (Mech. Div.). Doors (see Doors) Failures, Reduced Frames (see Frames) Freight Design Effect of, on wheel service Freight, Rehabilitation of Heating (see Heating) Orders: Prospects for new equipment Replacements: New life at the top Roofs (see Roofs) Tendencies in, by P. P. Barthelemy Traffic Officer's suggestions 159, 202, 2128, 255, 287, Wheels (see Wheels) Car Foremen's Assn. of Chicago (see Clubs and Associations) Car pooling, Committee to study Cars Freight Box, Standard steel-sheathed A. R. A Helium, for U. S. Navy Hopper All-welded, with cast-steel underframes For cement (D. & H.). Panel side (C. & O.)	412* 259\$ 269* 450* 169\$ 212\$ 3241 18\$ 326\$ 92\$ 452† 388* 58* 155* 314* 3363* 282*

* Illustrated article; \$ editorial; † short, non-illustrated article or note; ‡ communication.

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Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul. 558.	453† 163* 39* 58‡ 448*	Door, Portable Fabricating, for hopper-car sides Lubricator Steam hose testing. Test, for air-brake and signal hose Test, Portable, for instruction of pas-	298* 297* 180* 219* 61*	Teamwork with the supply department Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing	387 188 578 424*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡	Door, Portable Fabricating, for hopper-car sides Lubricator Steam hose testing Test, for air-brake and signal hose Test, Portable, for instruction of passenger-train service employees.	298* 297* 180* 219* 61*	Teamwork with the supply department Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.)	387 188 578
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446*	Door, Portable Fabricating, for hopper-car sides Lubricator Steam hose testing Test, for air-brake and signal hose Test, Portable, for instruction of passenger-train service employees Reamer, Floating (G. T. W.)	298* 297* 180* 219* 61* 26* 178* 447* 446*	Teamwork with the supply department Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skin-	387 18\$ 57\$ 424* 170* 368* 297*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold. Portable, for the boiler shop.	298* 297* 180* 219* 61* 26* 178* 447* 446* 405* 30*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm	387 18\$ 57\$ 424* 170* 368* 297* 449* 170*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251	Door, Portable Fabricating, for hopper-car sides Lubricator Steam hose testing Test, for air-brake and signal hose Test, Portable, for instruction of passenger-train service employees Reamer, Floating (G. T. W.)	298* 297* 180* 219* 61* 26* 178* 447* 446* 405* 30* 371*	Teamwork with the supply department Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines.	387 18\$ 57\$ 424* 170* 368* 297* 449*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398§	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the Sketching aid, A handy.	298* 297* 180* 219* 61* 26* 178* 447* 446* 405* 30* 371* 299* 179*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor car engines Tests AB freight brake. Car inversal bearing Pailway Sarvice &	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 267*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398\$ 330*	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe. Light.	298* 297* 180* 219* 61* 26* 178* 447* 446* 405* 30* 371* 299* 179* 405* 408*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor car engines Tests AB freight brake. Car inversal bearing Pailway Sarvice &	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 267*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398§ 330* 237 170	Door, Portable Fabricating, for hopper-car sides Lubricator Steam hose testing. Test, for air-brake and signal hose Test, Portable, for instruction of passenger-train service employees Reamer, Floating (G. T. W.). Reseating swing-check valves. Rod polishing (U. P.). Sash-rack skid Scaffold, Portable, for the boiler shop Scaffold support, Hopper car. Shaper, A short cut for the Sketching aid, A handy Skid, Sash-rack Sling and rack for pipe, Light	298* 297* 180* 219* 61* 26* 178* 447* 446* 30* 371* 299* 405* 408*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor car engines Tests AB freight brake. Car inversal bearing Pailway Sarvice &	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 267*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398§ 330* 237 170	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.). Reseating swing-check valves. Rod polishing (U. P.). Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stand, Portable, for pipe vise. Stands, Repair, Distributing valve.	298* 297* 180* 219* 61* 26* 178* 446* 446* 405* 405* 405* 408* 179* 170* 107* 107* 1334*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines Tests AB freight brake Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.) Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for	387 188 578 424* 170* 368* 297* 449* 170* 267* 345* 323* 426* 122*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398§ 330* 237 170	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light Stand, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink	298* 297* 180* 219* 61* 26* 447* 446* 30* 371* 179* 408* 170* 105* 334*	Teamwork with the supply department Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines Tests AB freight brake Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.). Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars Wind tunnel, of locomotive streamlining.	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 267* 345* 323* 426* 122* 75*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398§ 330* 237 170	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light Stand, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink	298* 297* 180* 219* 61* 26* 447* 446* 30* 371* 179* 408* 170* 105* 334*	Teamwork with the supply department Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines Tests AB freight brake Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.). Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars Wind tunnel, of locomotive streamlining.	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 267* 345* 323* 426* 122* 75*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398§ 330* 237 170	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.). Reseating swing-check valves. Rod polishing (U. P.). Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stands, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand. with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummy.	298* 297* 2180* 219* 61* 26* 178* 446* 4405* 301* 299* 408* 107* 105* 408* 107* 334* 369* 369* 369* 338*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines Tests AB freight brake Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.) Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars Wind tunnel, of locomotive streamlining, by J. J. Green	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 267* 345* 122* 75* 204*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398\$ 330* 237 170 329\$	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stand, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand. with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummry. Vat for applying No-Ox-Id compound.	298* 297* 2180* 2180* 2180* 2180* 2180* 2405* 371* 299* 405* 405* 310* 405* 334* 334* 334* 334* 338* 334* 338* 338	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co. Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines Tests AB freight brake. Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.) Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars Wind tunnel, of locomotive streamlining, by J. J. Green. Texas & Pacific Budd light-weight stainless-steel passenger train Spring rigging, Interlocking.	387 18\$ 57\$ 424* 170° 368* 297° 449° 170° 345° 323° 426° 122° 75° 204°
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398\$ 330* 237 170 329‡	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stand, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand, with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummy. Vat for applying No-Ox-Id compound. Vise for repairing flexible metallic pipe	298* 297* 2180* 2180* 261* 26* 178* 446* 405* 301* 299* 405* 408* 170* 105* 334* 369* 369* 374* 265* 374*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.). flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor car engines. Tests AB freight brake. Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.) Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars. Wind tunnel, of locomotive streamlining, by J. J. Green. 149*, Texas & Pacific Budd light-weight stainless-steel passen- ger train Spring rigging, Interlocking. Thermolizing speeds pulverized coal combus-	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 345* 323* 426* 122* 75* 204*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398 330* 237 170 329‡	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.). Reseating swing-check valves. Rod polishing (U. P.). Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stands, Repair, Distributing valve. Stands, Repair, Distributing valve. Storchouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand, with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummy. Vat for applying No-Ox-Id compound. Vise for repairing flexible metallic pipe ioints (A. T. & S. F.). Wagon, Scrap, for the tin shop.	298* 297* 219* 261* 26* 178* 446* 405* 371* 299* 408* 170* 1105* 334* 409* 3369* 409* 3369* 409* 338* 409* 338* 409* 409* 409* 409* 409* 409* 409* 409	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.). flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor car engines. Tests AB freight brake. Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.) Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars. Wind tunnel, of locomotive streamlining, by J. J. Green. 149*, Texas & Pacific Budd light-weight stainless-steel passen- ger train Spring rigging, Interlocking. Thermolizing speeds pulverized coal combus-	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 345* 323* 426* 122* 75* 204*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 581; 448* 446* 234 251 44* 398* 330* 237 170 3291; 402 167* 2151; 179*	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.). Reseating swing-check valves. Rod polishing (U. P.). Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid. A handy. Skid, Sash-rack Sling and rack for pipe, Light Stand for testing device, Single-car. Stands, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand. with third wheel. Truck, Hand. with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummy. Vat for applying No-Ox-Id compound. Vise for repairing flexible metallic pipe ioints (A. T. & S. F.). Wagon, Scrap, for the tin shop. Washers, Making (A. T. & S. F.). Water can, Engineman's. Wheel blocks for the repair track.	298* 297* 219* 261* 26* 178* 446* 405* 371* 292* 408* 170* 1105* 3369* 409* 265* 374* 179* 338*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines Tests AB freight brake Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.) Journal bearing, Railway Service & Supply Corp. Westinghouse AB brake equipment for freight cars Wind tunnel, of locomotive streamlining, by J. J. Green	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 267* 345* 323* 426* 122* 75* 204* 383* 50* 435*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 581 448* 446* 234 251 44* 398\$ 330* 237 170 329\$ 402 167\$ 2151* 179* 64*	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stand, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand, with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummy. Vat for applying No-Ox-Id compound. Vise for repairing flexible metallic pipe ioints (A. T. & S. F.) Wagon, Scrap, for the tin shop. Washers, Making (A. T. & S. F.) Water can, Engineman's. Wheel blocks for the repair track. Yoke and electric crane truck for roll-	298* 297* 180* 219* 61* 26* 178* 446* 405* 301* 299* 405* 408* 170* 107* 334* 339* 409* 3374* 377* 338* 374*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines Tests AB freight brake. Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.) Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars Wind tunnel, of locomotive streamlining, by J. J. Green Texas & Pacific Budd light-weight stainless-steel passenger train Spring rigging, Interlocking. Thermolizing speeds pulverized coal combustion Threading machine, Selective gear box for, Landis Machine Co Timken Roller Bearing Co., Drill bit with removable cutters Timken roller bearings applied to trailer	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 345* 345* 323* 426* 122* 75* 204* 383* 50* 435* 142* 144*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398\$ 330* 237 170 329‡ 402 167\$ 215; 179* 64* 7* 405*	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stand, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand. with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummy. Vat for applying No-Ox-Id compound. Vise for repairing flexible metallic pipe ioints (A. T. & S. F.). Wagon, Scrap, for the tin shop. Washers, Making (A. T. & S. F.). Washers, Making (A. T. & S. F.). Wheel blocks for the repair track. Yoke and electric crane truck for rolling driving wheels (C. M. St. P. &	298* 297* 219* 26* 178* 446* 405* 301* 299* 405* 408* 170* 105* 334* 3369* 409* 3371* 2408* 3369* 3369* 338* 3371*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines Tests AB freight brake. Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.) Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars Wind tunnel, of locomotive streamlining, by J. Green	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 345* 323* 426* 122* 75* 204* 142* 144* 224*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398 330* 237 170 329‡ 402 167 215 179* 64* 7* 405* 22	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stand, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand, with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummry. Vat for applying No-Ox-Id compound. Vise for repairing flexible metallic pipe joints (A. T. & S. F.) Wagon, Scrap, for the tin shop. Washers, Making (A. T. & S. F.) Water can, Engineman's. Wheel blocks for the repair track. Yoke and electric crane truck for rolling driving wheels (C. M. St. P. & P.) Shops, Car Passenger, at Milwaukee (C. M. St. P.	298* 297* 219* 26* 26* 178* 446* 405* 371* 299* 405* 170* 1105* 3369* 409* 3369* 409* 338* 338* 245* 270* 270*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.). flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor car engines. Tests AB freight brake. Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.). Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars. Wind tunnel, of locomotive streamlining, by J. J. Green. 149*, Texas & Pacific Budd light-weight stainless-steel passenger train Spring rigging, Interlocking. Thermolizing speeds pulverized coal combustion Threading machine, Selective gear box for, Landis Machine Co. Timken Roller Bearing Co., Drill bit with removable cutters Timken roller bearings applied to trailer trucks Tires (see Wheels) Titus, H. J., Controlling maintenance ex-	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 345* 345* 323* 426* 122* 75* 204* 383* 50* 435* 142* 144* 224*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398 330* 237 170 329‡ 402 167 215 179* 64* 7* 405* 22	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.). Reseating swing-check valves. Rod polishing (U. P.). Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid. A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stands, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand. with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummy. Vat for applying No-Ox-Id compound. Vise for repairing flexible metallic pipe ioints (A. T. & S. F.). Wagon, Scrap, for the tin shop. Washers, Making (A. T. & S. F.). Water can, Engineman's. Wheel blocks for the repair track. Yoke and electric crane truck for rolling driving wheels (C. M. St. P. & P.) Shops, Car Passenger, at Milwaukee (C. M. St. P. & P.) Reading layout	298* 297* 219* 219* 219* 261* 26* 178* 446* 405* 371* 299* 408* 170* 105* 334* 179* 377* 265* 3374* 270*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.) flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor ear engines Tests AB freight brake. Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.) Journal bearing, Railway Service & Supply Corp. Westinghouse AB brake equipment for freight cars Wind tunnel, of locomotive streamlining, by J. J. Green	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 345* 323* 426* 122* 75* 204* 383* 50* 142* 144* 224*
Power, order annulled. Riccius, H. E., Locomotive steam pipe casing Richardson, Lawrence, Graphical analysis of mechanical operations. Robbing Peter to pay Paul	453† 163* 39* 58‡ 448* 446* 234 251 44* 398 330* 237 170 329‡ 402 167 215 179* 64* 22 30* 371*	Door, Portable Fabricating, for hopper-car sides. Lubricator Steam hose testing. Test, for air-brake and signal hose. Test, Portable, for instruction of passenger-train service employees. Reamer, Floating (G. T. W.) Reseating swing-check valves. Rod polishing (U. P.) Sash-rack skid Scaffold, Portable, for the boiler shop. Scaffold support, Hopper car. Shaper, A short cut for the. Sketching aid, A handy. Skid, Sash-rack Sling and rack for pipe, Light. Stand for testing device, Single-car. Stand, Portable, for pipe vise. Stands, Repair, Distributing valve. Storehouse kink Straightening devices, Car. Support, Safe, for mounting wheels. Truck, Hand, with third wheel. Truck, Portable, for gas tanks. Valves, Piston, Dummry. Vat for applying No-Ox-Id compound. Vise for repairing flexible metallic pipe joints (A. T. & S. F.) Wagon, Scrap, for the tin shop. Washers, Making (A. T. & S. F.) Water can, Engineman's. Wheel blocks for the repair track. Yoke and electric crane truck for rolling driving wheels (C. M. St. P. & P.) Shops, Car Passenger, at Milwaukee (C. M. St. P.	298* 297* 219* 26* 26* 178* 446* 405* 371* 299* 405* 170* 1105* 3369* 409* 3369* 409* 338* 338* 245* 270* 270*	Teamwork with the supply department. Technocracy Another fad? What does, lead to? Test kit for injectors, Superheater Co Testing device, Single-car air hose (A. T. & S. F.). flexible metallic connectors, by A. Skinner pump, Hydrostatic regulator diaphragm rail motor car engines. Tests AB freight brake. Car journal bearing, Railway Service & Supply Corp. Grate, Firebar (Union Pac.). Journal bearing, Railway Service & Supply Co. Westinghouse AB brake equipment for freight cars. Wind tunnel, of locomotive streamlining, by J. J. Green. 149*, Texas & Pacific Budd light-weight stainless-steel passenger train Spring rigging, Interlocking. Thermolizing speeds pulverized coal combustion Threading machine, Selective gear box for, Landis Machine Co. Timken Roller Bearing Co., Drill bit with removable cutters Timken roller bearings applied to trailer trucks Tires (see Wheels) Titus, H. J., Controlling maintenance ex-	387 18\$ 57\$ 424* 170* 368* 297* 449* 170* 345* 323* 426* 122* 75* 204* 383* 50* 142* 144* 224* 366\$ 128\$

Taylor, C Taylor F Terry, C Thatcher, Thornton, Timken Trainer, Transpor Trent, J Tyson R T-Z Rail

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. W Wabash, Automobile cars converted to stock		Central Foundry Co Chicago Pneumatic Tool Co Chicago Railway Equipment Co Clark Equipment Co Clingman, C. S Columbia Machine Works.	229 417 274 147 183 343	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W.	343 110 183*
W Wabash, Automobile cars converted to stock cars Wage conference	433*	Central Foundry Co Chicago Pneumatic Tool Co Chicago Railway Equipment Co Clark Equipment Co Clingman, C. S Columbia Machine Works Combustion Engineering Co., Inc Conneely, Emmett K.	229 417 274 147 183 343 343 380	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co.	343 110 183* 274 343 343
Wabash, Automobile cars converted to stock cars	433* 72† 377*	Central Foundry Co Chicago Pneumatic Tool Co Chicago Railway Equipment Co Clark Equipment Co Clingman, C. S Columbia Machine Works. Combustion Engineering Co., Inc Conneely, Emmett K Cook, James A	229 417 274 147 183 343 343 380 147	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F.	343 110 183* 274 343 343 183 110
Wabash, Automobile cars converted to stock cars. Wage conference	433* 72† 377* 364§	Central Foundry Co Chicago Pneumatic Tool Co Chicago Railway Equipment Co Clark Equipment Co Clingman, C. S Columbia Machine Works. Combustion Engineering Co., Inc Conneely, Emmet K. Cook, James A. Cope, H. W. Cornell, H. J.	229 417 274 147 183 343 343 380 147 231 274*	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R.	343 110 183* 274 343 343 183
Wabash, Automobile cars converted to stock cars. Wage conference	433* 72† 377*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works. Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath. Paul D.	229 417 274 147 183 343 343 380 147 231 274* 229 37	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R.	343 110 183* 274 343 343 183 110 418 73 37
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364§ 293§ 338*	Central Foundry Co Chicago Pneumatic Tool Co Chicago Railway Equipment Co Clark Equipment Co Clingman, C. S Columbia Machine Works. Combustion Engineering Co., Inc Conneely, Emmet K. Cook, James A. Cope, H. W. Cornell, H. J.	229 417 274 147 183 343 343 380 147 231 274* 229	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace	343 110 183* 274 343 343 110 418 73 37 343 343
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364§ 293§ 338*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works. Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J.	229 417 274 147 183 343 380 147 231 274* 229 37 37	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R.	343 110 183* 274 343 343 110 418 73 37 343 343 343 418
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364§ 293§ 338*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works. Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc.	229 417 274 147 183 343 380 147 231 2274* 229 37 37 37	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co.	343 110 183* 274 343 343 110 418 73 343 343 418 274 183
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop	433* 72† 377* 364§ 293§ 338*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works. Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc.	229 417 274 147 183 343 343 343 347 231 274* 229 37 37 308 110 229 37	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343,	343 110 183* 274 343 343 110 418 73 37 343 343 418 274 183 229 417
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364\$ 293\$ 338* 58\$ 401\$ 167\$	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service. Inc.	229 417 1274 147 183 343 343 380 147 2231 274* 229 37 37 308 110 229	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt Frederic R.	343 110 183* 274 343 343 110 418 73 37 343 343 418 274 183 229 417
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364\$ 293\$ 338* 58\$ 401\$ 167\$	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C.	229 417 274 147 183 343 343 380 147 231 2274* 229 37 37 308 110 229 37 417 229	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co110, 230, 274, 343, Pullman, Inc308, Pullman, Inc	343 110 183* 274 343 343 343 110 418 73 343 343 343 418 274 183 229 417 343 274
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop	433* 72† 377* 364§ 293§ 338* 581* 367 4011* 1678 448* 113* 407*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works. Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Coope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C.	229 417 147 183 343 343 343 343 343 343 37 231 274* 229 37 37 37 308 110 229 37 417 229 229	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Patririge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Pullman-Bradley Car Corp. Railway Paint Co. Railway Paint Co.	343 110 183* 274 343 343 110 418 73 343 343 418 229 417 343 2274 274
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop	433* 72† 377* 364§ 293§ 338* 581* 367 4011* 1678 448* 113* 407*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C.	229 417 1274 1183 343 343 343 380 147 231 2274* 229 37 37 308 110 229 37 417 229	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Patririge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Pullman-Bradley Car Corp. Railway Paint Co. Railway Paint Co.	343 110 183* 274 343 343 110 418 73 343 343 418 229 417 343 2274 274
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop	433* 72† 377* 364§ 293§ 338* 581* 367 4011* 1678 448* 113* 407*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Electro-Motive Co. Elliott, W. H.	229 417 274 147 183 343 343 343 343 3480 147 231 274* 229 37 37 37 308 110 229 37 417 229 229 73 417	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Patririge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Pullman-Bradley Car Corp. Railway Paint Co. Railway Paint Co.	343 110 183* 274 343 343 110 418 73 343 343 418 229 417 343 2274 274
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop	433* 72† 377* 364§ 293§ 338* 581* 367 4011* 1678 448* 113* 407*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Electro-Motive Co. Elliott, W. H.	229 417 417 183 343 343 380 147 221 37 37 308 110 229 37 417 229 229 229 73	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Patririge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Pullman-Bradley Car Corp. Railway Paint Co. Railway Paint Co.	343 110 183* 274 343 343 110 418 73 343 343 418 229 417 343 2274 274
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364§ 293§ 338* 52* 401* 167§ 448* 113* 448* 1218* 68 223*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David	229 417 417 183 343 343 380 147 231 274 37 37 308 110 229 37 37 417 229 229 229 229 417	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co. 110, 230, 274, 343, Pullman, Inc. 308, Pullman, Inc. Railway Paint Co. Railway Service & Supply Corp. Reading Iron Co. Reading Iron Co. Reeder, Nathaniel S. Republic Steel Corp. 229, 274, Richardson, Marion B. Robinson, G. T. Roless mith Co. Ross and White Co.	343 110 183* 274 343 343 110 418 73 343 418 274 183 227 417 343 274 183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364§ 293§ 338* 52* 401* 167§ 448* 113* 448* 1218* 68 223*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works. Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cooe, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Electro-Motive Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co.	229 417 417 183 343 380 147 221 37 308 110 229 37 417 229 229 73 417 380 229 417 147 148	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co. 110, 230, 274, 343, Pullman, Inc. 308, Pullman, Inc. Railway Paint Co. Railway Service & Supply Corp. Reading Iron Co. Reading Iron Co. Reeder, Nathaniel S. Republic Steel Corp. 229, 274, Richardson, Marion B. Robinson, G. T. Roless mith Co. Ross and White Co.	343 110 183* 274 343 343 110 418 73 343 418 274 183 227 417 343 274 183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance 285, Washers, Making (A. T. & S. F.) Washing cars (see Cleaning, Car) Waste, Stop that, by W. L. McGowan. 558, Water can, Engineman's. Water softener, Automatic, Permutit Co Weighing steel underframe wood cars. Weight, Equipment, and safety. Welding Acetylene, piston heads. Arc, in passenger car design. axle collars Coupler and following blocks (Ill. Cen.) Electric bronze, driving boxes. frame hinge lugs. Spot, the stainless steels, by V. W. Whitmer Straight gap, Metal & Thermit Corp Welding Equipment Blowpipe, Linde Air Products Co flux, Aluminum, Linde Air Products Co. Oxyacetylene cutting machine. Torch, Purox No. 28, Linde Air Prod.	433* 72† 377* 364\$ 293\$ 338* 582* 401\$ 167\$ 448* 113* 407* 447* 218* 68 223* 30* 377* 31*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Electro-Motive Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co.	229 417 147 183 343 343 343 380 147 2231 274* 229 37 37 308 110 229 417 229 229 417 229 417 417	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Patririge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Pullman-Bradley Car Corp. Railway Paint Co. Railway Paint Co.	343 110 183* 274 343 343 110 418 73 343 418 274 183 227 417 343 274 183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364§ 293§ 338* 52* 401‡ 167§ 448* 113* 447* 62* 447* 30* 37* 31* 107*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works. Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cooe, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Electro-Motive Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co.	229 417 147 183 343 343 380 147 2231 274* 229 37 37 308 110 229 37 417 229 229 417 229 417 147 148 230*	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co	343 110 183* 274 343 343 110 418 73 343 418 274 183 2274 274 183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance Washers, Making (A. T. & S. F.). Washing cars (see Cleaning, Car) Waste, Stop that, by W. L. McGowan. 55\(\) Waster, Stop that, by W. L. McGowan. 55\(\) Water can, Engineman's Water softener, Automatic, Permutit Co Weighing steel underframe wood cars. Weight, Equipment, and safety Welding Acetylene, piston heads. Arc, in passenger car design. axle collars Coupler and following blocks (Ill. Cen.) Electric bronze, driving boxes. frame hinge lugs. Spot, the stainless steels, by V. W. Whitmer Straight gap, Metal & Thermit Corp Welding Equipment Blowpipe, Linde Air Products Co. Oxyacetylene cutting machine. Torch, Purox No. 28, Linde Air Products Co. Welding patents, Electric pipe, upheld. Western Railway Club (see Clubs and Associations)	433* 72† 377* 364§ 293§ 338* 52* 401‡ 167§ 448* 113* 447* 62* 447* 30* 37* 31* 107*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Electro-Motive Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Foot, J. B., Sales Co. Franklin Railway Oil Corp.	229 417 147 183 343 380 147 221 229 37 37 308 110 229 27 417 229 229 73 417 229 229 73 417 229 229 73 417 229 229 73 417 229 229 37 37 37 30 417 229 37 37 417 229 37 37 417 229 37 417 417 417 417 417 417 417 417 417 41	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. 308, Pullman-Bradley Car Corp. Railway Paint Co. Railway Service & Supply Corp. Reading Iron Co. Reading Iron Co. Reeder, Nathaniel S. Republic Steel Corp. Robinson, G. T. Roller-Smith Co. Ross and White Co. Ross, Clyde P. Ryding, Herbert C. Ryerson, Joseph T., & Son Safety Car Heating & Lighting Co. 230, 274, 230, 274.	343 110 183* 274 343 343 110 418 73 347 343 4183 229 417 343 343 343 343 343 343 343 343 343 34
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance Washers, Making (A. T. & S. F.). Washing cars (see Cleaning, Car) Waste, Stop that, by W. L. McGowan. 55\(\) Waster, Stop that, by W. L. McGowan. 55\(\) Water can, Engineman's Water softener, Automatic, Permutit Co Weighing steel underframe wood cars. Weight, Equipment, and safety Welding Acetylene, piston heads. Arc, in passenger car design. axle collars Coupler and following blocks (Ill. Cen.) Electric bronze, driving boxes. frame hinge lugs. Spot, the stainless steels, by V. W. Whitmer Straight gap, Metal & Thermit Corp Welding Equipment Blowpipe, Linde Air Products Co. Oxyacetylene cutting machine. Torch, Purox No. 28, Linde Air Products Co. Welding patents, Electric pipe, upheld. Western Railway Club (see Clubs and Associations)	433* 72† 377* 364§ 293§ 338* 582* 4012* 167§ 448* 407* 62* 447* 218* 68 223* 377* 31* 107* 109†	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Raiph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A.	229 417 183 343 343 343 343 3447 221 231 274 229 37 37 37 37 308 110 229 229 229 229 229 229 229 229 229 22	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. 308, Pullman-Bradley Car Corp. Railway Paint Co. Railway Service & Supply Corp. Reading Iron Co. Reading Iron Co. Reeder, Nathaniel S. Republic Steel Corp. Robinson, G. T. Roller-Smith Co. Ross and White Co. Ross, Clyde P. Ryding, Herbert C. Ryerson, Joseph T., & Son Safety Car Heating & Lighting Co. 230, 274, 230, 274.	343 110 183* 274 343 343 110 418 73 347 343 4183 229 417 343 343 343 343 343 343 343 343 343 34
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364§ 293§ 338* 58* 52* 401* 167§ 448* 113* 407* 218* 223* 30* 377* 31* 107* 109†	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. Coroel, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gaie, W. S. Gale, Frederick A. Gale Service & Construction Co. Gamon Meter Co.	229 417 147 183 343 380 147 231 274* 237 37 308 110 229 37 37 308 117 229 229 229 229 229 229 229 229 229 22	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Pullman, Inc. Railway Paint Co. Railway Service & Supply Corp. Reading Iron Co. Reading Iron Co. Reeder, Nathaniel S. Republic Steel Corp. Robinson, G. T. Robinson, G. T. Roller-Smith Co. Ross and White Co. Ross, Clyde P. Ryding, Herbert C. Sawyer, L. Sattley, C. A. Sawyer, L. Schmeltz, O. B. Scullin Steel Co.	343 110 183* 274 343 343 110 418 73 343 418 229 417 343 274 4183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance Washers, Making (A. T. & S. F.). Washing cars (see Cleaning, Car) Waste, Stop that, by W. L. McGowan. 55%, Water can, Engineman's. Water softener, Automatic, Permutit Co Weighing steel underframe wood cars. Weight, Equipment, and safety. Welding Acetylene, piston heads. Arc, in passenger car design. axle collars. Coupler and following blocks (Ill. Cen.) Electric bronze, driving boxes. frame hinge lugs. Spot, the stainless steels, by V. W. Whitmer Straight gap, Metal & Thermit Corp Welding Equipment Blowpipe, Linde Air Products Co flux, Aluminum, Linde Air Products Co. Oxyacetylene cutting machine. Torch, Purox No. 28, Linde Air Products Co. Welding patents, Electric pipe, upheld. Western Railway Club (see Clubs and Associations) Westinghouse Air Brake Co. Tests of AB freight brake	433* 72† 377* 364§ 293§ 338* 52* 401‡ 167§ 448* 113* 447* 62* 447* 62* 437* 31* 107* 109†	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Ellectro-Motive Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A. Gale Service & Construction Co. Gardner, K. C. Garland, W. L.	229 417 147 183 343 380 147 229 37 308 110 229 417 229 229 417 229 229 229 417 148 230* 230 308 230 230 230 230 230 230 230 8	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Pullman, Inc. Railway Paint Co. Railway Service & Supply Corp. Reading Iron Co. Reading Iron Co. Reeder, Nathaniel S. Republic Steel Corp. Robinson, G. T. Robinson, G. T. Roller-Smith Co. Ross and White Co. Ross, Clyde P. Ryding, Herbert C. Sawyer, L. Sattley, C. A. Sawyer, L. Schmeltz, O. B. Scullin Steel Co.	343 110 183* 274 343 343 110 418 73 343 418 229 417 343 274 4183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell"	433* 72† 377* 364§ 293§ 338* 52* 401* 167§ 448* 113* 447* 62* 447* 218* 68 223* 37* 31* 107* 109†	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A. Gale Service & Construction Co. Gardner, K. C. Garland, W. L. General American Tank Car Corp.	229 417 147 183 343 343 343 3480 147 2231 274* 229 37 308 110 229 37 417 229 229 417 417 448 229 417 1448 230* 230 308 230 230 417 308 74	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Pullman, Inc. Railway Paint Co. Railway Service & Supply Corp. Reading Iron Co. Reading Iron Co. Reeder, Nathaniel S. Republic Steel Corp. Robinson, G. T. Robinson, G. T. Roller-Smith Co. Ross and White Co. Ross, Clyde P. Ryding, Herbert C. Sawyer, L. Sattley, C. A. Sawyer, L. Schmeltz, O. B. Scullin Steel Co.	343 110 183* 274 343 343 110 418 73 343 4184 217 343 227 4183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop	433* 72† 377* 364§ 293§ 338* 582* 4012* 167§ 448* 447* 218* 68* 2377* 31* 107* 109† 345* 326§ 373* 330*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Electro-Motive Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A. Gale Service & Construction Co. Gardner, K. C. Gardner, K. C. Gardner, K. C. General American Fank Car Corp. General Electric Co. Gengenbach, H. Barney.	229 417 147 183 343 349 347 231 274 237 37 308 110 229 37 37 308 110 229 229 229 229 229 229 229 229 237 417 229 230 308 230 308 230 417 308 230 417 308 37 418	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Pullman, Inc. Railway Paint Co. Railway Service & Supply Corp. Reading Iron Co. Reading Iron Co. Reeder, Nathaniel S. Republic Steel Corp. Robinson, G. T. Robinson, G. T. Roller-Smith Co. Ross and White Co. Ross, Clyde P. Ryding, Herbert C. Sawyer, L. Sattley, C. A. Sawyer, L. Schmeltz, O. B. Scullin Steel Co.	343 110 183* 274 343 343 110 418 73 343 418 229 417 343 274 4183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop	433* 72† 377* 364§ 293§ 338* 58* 52* 401; 167§ 448* 113* 407* 218* 223* 30* 377* 31* 107* 109† 345* 405* 326§ 373* 330* 59*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A. Gale Service & Construction Co. Gardner, K. C. Gardener, K. C. Gardeneral American Tank Car Corp. General American Tank Car Corp. General Electric Co. Gengenbach, H. Barney. Giebel R. L.	229 417 147 183 343 380 147 221 37 308 110 229 27 417 229 229 229 73 417 229 229 229 73 417 380 229 417 148 230* 229 30 230 230 230 230 230 230 230 230 230	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Pilliod Co. Pilliod Co. Pultt, Frederic B. Pressed Steel Car Co	343 110 183* 274 343 343 110 4183 373 343 4183 274 183 274 183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell". "Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364§ 293§ 338* 582* 4012* 167§ 448* 447* 218* 68* 2377* 31* 107* 109† 345* 326§ 373* 330*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A. Gale Service & Construction Co. Gardner, K. C. Gardener, K. C. Gardeneral American Tank Car Corp. General American Tank Car Corp. General Electric Co. Gengenbach, H. Barney. Giebel R. L.	229 417 147 183 343 380 147 221 37 308 110 229 27 417 229 229 229 73 417 229 229 229 73 417 380 229 417 148 230* 229 30 230 230 230 230 230 230 230 230 230	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Pilliod Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. Nullman-Bradley Car Corp. Railway Paint Co. Railway Service & Supply Corp. Railway Service & Supply Corp. Reading Iron Co	343 110 183* 274 343 343 110 4183 2174 183 2274 274 183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell". Ward, O. E., Controlling the cost of locomotive maintenance	433* 72† 377* 364§ 293§ 338* 58* 52* 401; 167§ 448* 113* 407* 218* 223* 30* 377* 31* 107* 109† 345* 405* 326§ 373* 330* 59*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A. Gale Service & Construction Co. Gardner, K. C. Garland, W. L. General American Tank Car Corp. Gengenbach, H. Barney. Giebel, R. L. Gilbert, Charles L. Gilbert, Huntley H. Goble, Arthur S. Goodrich Rubber Co.	229 417 147 183 343 343 3480 147 2231 274 229 37 308 110 229 37 417 229 229 229 229 417 380 229 229 417 380 229 417 380 229 417 380 229 417 380 230 417 380 230 417 380 230 417 380 230 230 417 388	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. Parcar Corp. Parker, Horace Patriridge, H. R. Permutit Co. Pilliod Co. Pilliod Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. 308, Pullman-Bradley Car Corp. Railway Paint Co. Railway Paint Co. Railway Paint Co. Railway Bervice & Supply Corp. Reeder, Nathaniel S. Republic Steel Corp	343 110 183* 274 343 343 343 418 217 343 217 343 217 343 217 343 343 343 343 343 343 343 343 343 34
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop	433* 72† 377* 364\$ 293\$ 338* 582* 4012* 167\$ 448* 447* 218* 68* 2337* 31* 107* 109† 345* 326\$ 373* 330* 59* 410* 7*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A. Gale Service & Construction Co. Gardner, K. C. Garland, W. L. General American Tank Car Corp. George Arthur S. Goodrich Rubber Co. Goulds Pumps. Inc.	229 417 147 183 343 380 147 229 37 310 229 229 229 73 417 229 229 229 73 417 148 230* 229 230 230 230 230 230 230 230 230 230 230	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Pilliod Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co	343 110 183* 274 343 343 110 4183 2174 183 2274 274 183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop. "War Is Hell" Ward, O. E., Controlling the cost of locomotive maintenance Washers, Making (A. T. & S. F.) Washing cars (see Cleaning, Car) Waste, Stop that, by W. L. McGowan. 558, Water can, Engineman's. Water softener, Automatic, Permutit Co Weighing steel underframe wood cars. Weight, Equipment, and safety. Welding Acetylene, piston heads Arc, in passenger car design. axle collars. Coupler and following blocks (Ill. Cen.) Electric bronze, driving boxes. frame hinge lugs Spot, the stainless steels, by V. W. Whitmer Straight gap, Metal & Thermit Corp Welding Equipment Blowpipe, Linde Air Products Co flux, Aluminum, Linde Air Products Co. Oxyacetylene cutting machine. Torch, Purox No. 28, Linde Air Products Co. Welding patents, Electric pipe, upheld. Western Railway Club (see Clubs and Associations) Westinghouse Air Brake Co. Tests of AB freight brake	433* 72† 377* 364§ 293§ 338* 52* 401* 167§ 448* 113* 447* 62* 4218* 68 223* 307* 31* 107* 109† 345* 405\$ 373* 330* 59* 410*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Paulmatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Ellectro-Motive Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A. Gale Service & Construction Co. Gardner, K. C. Garland, W. L. General American Tank Car Corp. General Huntley H. Goble, Arthur S. Goodrich Rubber Co. Goulds Pumps, Inc. Graham, C. E. Graham, C. E. Graham, C. E. Graham, C. E.	229 417 147 183 343 343 343 343 340 147 221 37 308 110 2229 417 229 229 417 229 417 229 417 148 230 417 380 230 417 380 230 417 380 231 418 37 4418 37 418 37 417	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Pilliod Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co	343 110 183* 274 343 343 110 4183 2174 183 2274 274 183 343 343 343 343 343 343 343 343 343 3
Wabash, Automobile cars converted to stock cars Wage conference Wagon, Scrap, for the tin shop	433* 72† 377* 364§ 293§ 338* 52* 401* 167§ 448* 113* 447* 62* 4218* 68 223* 307* 31* 107* 109† 345* 405\$ 373* 330* 59* 410*	Central Foundry Co. Chicago Pneumatic Tool Co. Chicago Railway Equipment Co. Clark Equipment Co. Clark Equipment Co. Clingman, C. S. Columbia Machine Works Combustion Engineering Co., Inc. Conneely, Emmett K. Cook, James A. Cope, H. W. Cornell, H. J. Cravath, Paul D. Crocombe, W. E. Crowley, T. J. Dearborn Chemical Co. Delaware Steel Service, Inc. Dodson, L. D. Doke, George Doyle, R. E. Duryea, Otho C. Earle Gear & Machine Co. Edgewater Steel Co. Elliott, W. H. Farrell, J. R. Field, Marshall Findlay, David Firestone Tire & Rubber Co. Flanders, Ralph E. Foote, F. D. Ford, J. B., Sales Co. Franklin Railway Oil Corp. Gain, W. S. Gale, Frederick A. Gale Service & Construction Co. Gardner, K. C. Garland, W. L. General American Tank Car Corp. George Arthur S. Goodrich Rubber Co. Goulds Pumps. Inc.	229 417 183 343 3480 147 229 37 37 308 110 229 37 417 229 229 229 417 1448 230 417 1448 230 417 147 148 230 417 380 230 230 230 230 230 230 230 230 230 23	National Weld Testing Bureau New York Air Brake Co. Nicol, George A. Osgood-Bradley Car Corp. Owens, James W. Oxweld Railroad Service Co. P. & M. Co. Packer, O. F. Padmore, B. R. Pantasote Co. Paradies, Richard R. ParCar Corp. Parker, Horace Partridge, H. R. Permutit Co. Pilliod Co. Platt, Frederic B. Pressed Steel Car Co 110, 230, 274, 343, Pullman, Inc. 308, Pullman, Inc. Railway Paint Co. Railway Service & Supply Corp. Reading Iron Co. Reading Iron Co. Reading Iron Co. Republic Steel Corp. Republic Steel Corp. Robinson, G. T. Roller-Smith Co. Ross and White Co. Ross, Clyde P. Ryding, Herbert C. Ryerson, Joseph T., & Son. Safety Car Heating & Lighting Co. Sattley, C. A. Sawyer, L. Schmeltz, O. B. Scullin Steel Co. Scaully Jones & Co. Sexton, John R. Sherwood, R. D. Shiffer, W. S. Sipes, C. S. Snyder, H. B. Square D Co. Standard Locomotive Equipment Co. Standard Steel Co. Starrett, L. S., Co. Stearnes-Stafford, Inc.	343 110 183* 274 343 343 110 4183 2174 183 2274 183 343 343 343 343 343 343 343 343 343 3

* Illustrated article; \$ editorial; † short, non-illustrated article, or note; ‡ communication.

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